

# The Doorway™

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We RIDE This Tide  
**TOGETHER**





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It's been one heck of a ride the last couple of years, with challenges most of us could've never imagined. The precarious economic situation devastated industries across the globe. Many U.S. companies, previously considered permanent fixtures, have been shuttered without ceremony. We are hopeful those dark days are behind us as we rebuild and move forward. While state and local governments struggle to realign their priorities, private industry is busy working to stabilize itself.

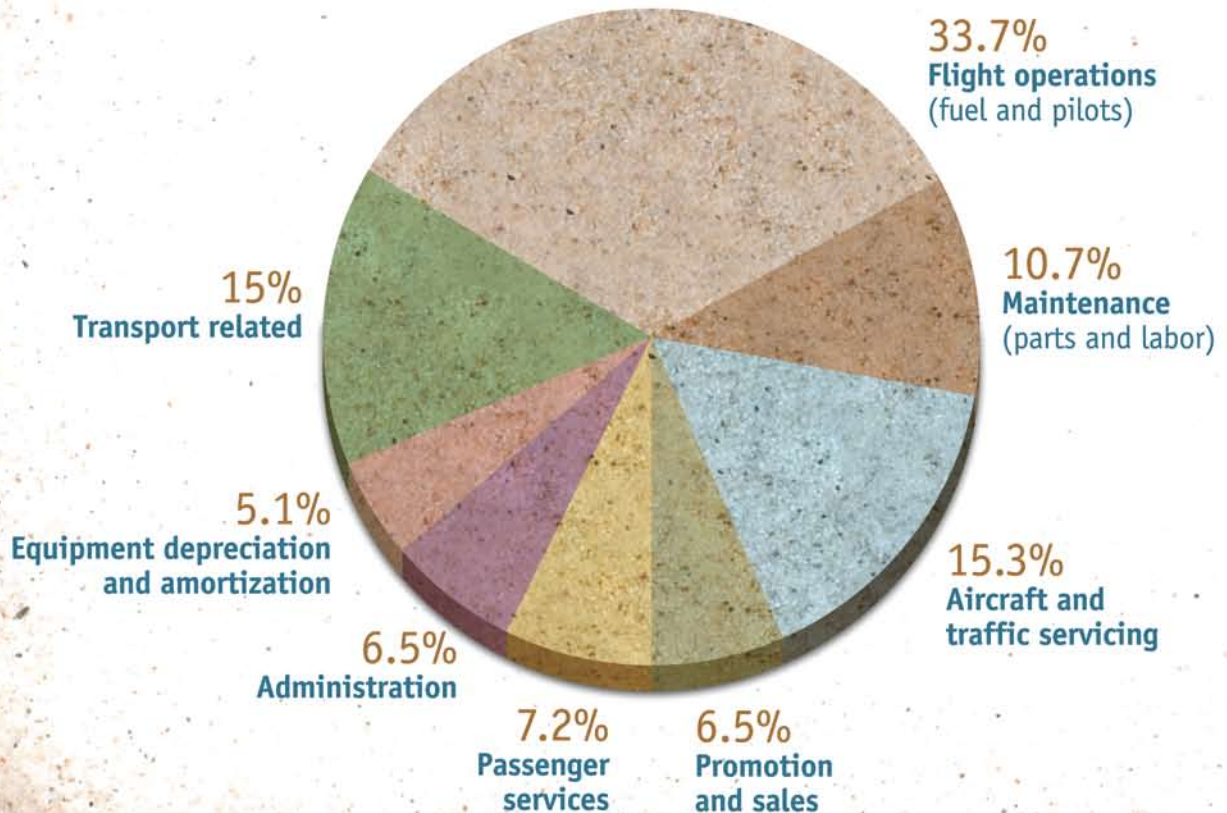
The airline industry is especially sensitive to the global economy. Travel, once considered essential, is being scrutinized as a means to reduce costs. This applies to both leisure and business travel. At M.C. Gill Corporation, we are manufacturing products to help our airline customers ride out the precarious economic tide.



### Air travel habits changed as we entered a new century.

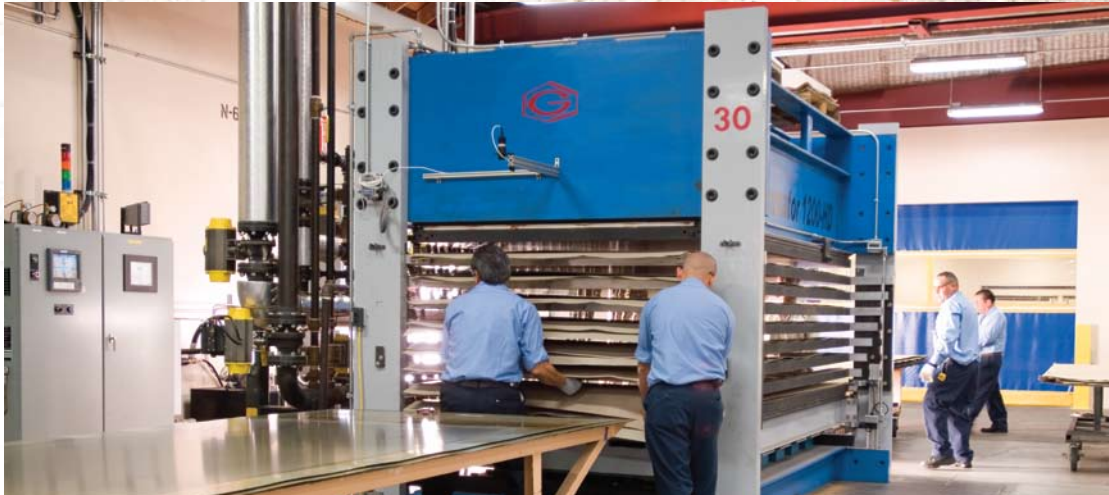
"Most commercial airline companies declined precipitously after the terrorist events of September 11 as consumers flew less for business and leisure."<sup>1</sup> After September 11, 2001 consumer confidence was slow to return. Concurrently, the cost of oil and fuel were increasing at an alarming rate. "Compounding the issues around declining consumer

demands was the concurrent rise in oil prices, which typically constitutes 30% of an airline's operating cost and is the major expense for commercial airline companies."<sup>1</sup> Providentially, in the decades before the millennium, the airline industry had begun to adopt measures to reduce the cost of doing business. One measure is the use of revolutionary weight-saving plus longer-lasting materials. In today's economy, those materials may provide the critical solution to the airline industry's question: "How do I survive?"



<sup>1</sup> Airlines, [www.wikinvest.com/industry/Airlines](http://www.wikinvest.com/industry/Airlines), 3/8/2010





As a manufacturer of advanced composite materials, M.C. Gill Corporation has the opportunity to impact our customers' bottom line in two critical areas. First, we manufacture products which provide significant weight savings that will translate into reduced fuel consumption. And second, by offering products with improved mechanical properties and corrosion resistance that promise greater longevity for better aircraft utilization. "The most basic metric for an airline is aircraft utilization. This is a measure of the average number of hours that each aircraft is flying in each 24-hour period. Planes that are flying are probably making money. Planes that are sitting on the ramp, whether undergoing maintenance, suffering delays due to weather or waiting for crews to fly them are not making money. Part of the 'art' in running an airline is keeping utilization high."<sup>2</sup> In today's

economy, aircraft operators count on M.C. Gill Corporation materials to support their overall cost reduction efforts. We are based in the United States, but serve the global airline industry market.

A perfect example of how aircraft design can determine operational savings is evident in the Airbus A320. Composites are used in the entire tail structure, fuselage belly skins, fin/fuselage fairings, fixed leading- and trailing-edge bottom access panels and deflectors, trailing-edge flaps, flap-track fairings, spoilers, ailerons, wheel doors, main gear leg fairing doors and nacelles. The comprehensive use of composites offers longer in-service life plus a 28% weight reduction to the A320 airframe. Airbus aircraft operators are eager to leverage the benefits that composite materials provide but are careful to only put their trust in qualified composite products.

<sup>2</sup> Airlines, [www.wikinvest.com/industry/Airlines](http://www.wikinvest.com/industry/Airlines), 3/8/2010



## We Ride This Tide Together

It has been more than two decades since M.C. Gill Corporation qualified its first proprietary floor panel with Airbus Industrie. Since that time, we have introduced a portfolio of high-performance floor panels and cargo liners that support Airbus operators and maintenance providers throughout the world. In March 2010, we published a comprehensive brochure detailing M.C. Gill Corporation Airbus Qualified Products. The brochure includes a slide-rule tool (for selecting the right cargo liners, laminates and floor panel products), a CD containing technical data and a thorough description of qualified Airbus products that are ideal for after-market and OEM customers. The featured products are specifically suited for either the cargo or cabin areas of an aircraft and demonstrate the depth of our product offering.



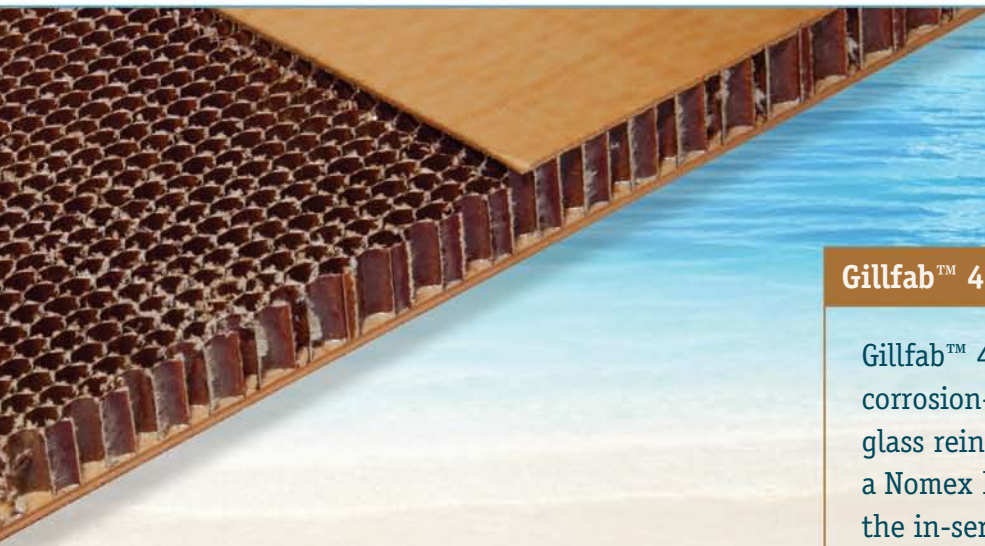
**For a copy of the Airbus brochure,  
contact your M.C. Gill Corporation sales  
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### Gillfab™ 4223

One of our earliest qualified cargo floor panels is Gillfab™ 4223. It is qualified to Airbus Industrie Technical Specification 5360 M1M 000 500 (BCC2). Gillfab™ 4223 is a high-strength floor panel made from woven glass reinforced phenolic facings bonded to Nomex® honeycomb core. This panel is designed to exceed the increased impact and abrasion resistance requirements of the BCC2 specification, without the addition of an aluminum top sheet. Our non-metallic design offers excellent in-service performance and avoids the potential in-service issues commonly associated with aluminum overlay (e.g., corrosion, de-lamination and peeling). Our scientists realized an opportunity to exceed existing specification requirements and developed a significantly stronger and more durable floor panel. The result is our next-generation, high-performing, bulk cargo floor panel: Gillfab™ 4523.



### Gillfab™ 4523

Gillfab™ 4523 is designed to offer superior impact and abrasion resistance. This unique construction optimizes the facing and panel properties using a combination of woven and unidirectional glass reinforcements with an M.C. Gill proprietary phenolic resin formulation. The resulting impact strength is more than double that of the BCC2 panel and exceeds the Airbus BCC3 specification requirements. Bonded to Nomex honeycomb core, the unbalanced construction (0.060" top facing, 0.025" bottom facing) provides exceptional durability on the top panel surface, while eliminating the added weight and cost of a symmetrical design. Gillfab™ 4523 is approved for use in the bulk cargo areas of all A300, A310, A318, A319, A320, A321, A330 and A340 series aircraft.



### Gillfab™ 4522

Gillfab™ 4522 is a high-impact- and corrosion-resistant floor panel with woven glass reinforced phenolic facings bonded to a Nomex honeycomb core. Designed to meet the in-service conditions of a containerized compartment, this construction balances strength with weight to achieve optimal performance. Gillfab™ 4522 is approved for use in the containerized cargo compartment of all A300, A310, A320, A321, A330 and A340 aircraft.



Gillfab™ 4422 is a high-impact-resistant cargo liner sandwich panel, comprised of a combination of woven glass reinforced phenolic facings with 1-mil Tedlar® overlay, bonded to Nomex honeycomb core. The incorporation of S-glass reinforcement yields incomparable impact strength – over 20 times greater than Airbus specification requirements. This panel is manufactured in nine different types, featuring either 0.013" or 0.020" thick facings, for use in sidewall, ceiling, partition wall, and decompression panel applications. Gillfab™ 4422 is approved for use in the cargo compartment of all A300, A310, A318, A319, A320 and A321 series aircraft.



## We Ride This Tide Together

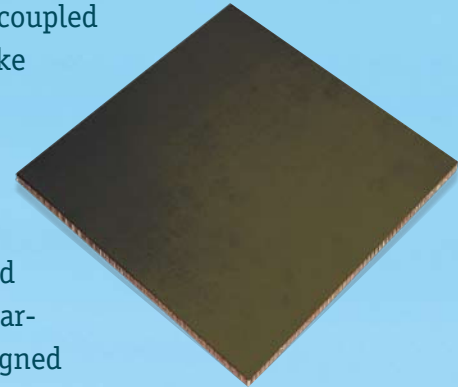
### Gillfab™ 1367A

Gillfab™ 1367A is high-impact-resistant cargo liner manufactured using a combination of woven S-glass reinforcement with a low smoke and toxicity phenolic resin system to achieve superior mechanical and physical properties. A 1-mil white Tedlar overlay on the face side offers surface reflectivity and resistance to cleaning solutions. Gillfab™ 1367A was first introduced more than 20 years ago and has since become the standard for major OEM programs throughout the world. It is available in nine different types ranging from 0.013" to 0.060" thick. Gillfab™ 1367A is approved for use in designated areas of the cargo compartment in A300, A319, A320, A321, A330 and A340 series aircraft.



### Gillfab™ 4505

M.C. Gill Corporation also offers qualified products for the cabin area of Airbus aircraft that deliver superior wear plus weight-saving properties. Gillfab™ 4505 (Type PC3) is specified to Airbus Industrie Technical Specification 5360 M1M 000600 (PC3). It is a high-performance floor panel featuring unidirectional carbon-reinforced phenolic facings bonded to Nomex honeycomb core. Our proprietary design capitalizes on the superior strength and modulus of carbon fiber coupled with a low-smoke phenolic resin matrix to achieve optimum weight, performance and flammability characteristics. Designed for ease of fabrication and installation, the construction includes a lightweight woven glass scrim on the outer facing surfaces to protect against galvanic corrosion. Note: Gillfab™ 4605 (Type PC1) is a derivative of Gillfab™ 4505 but with thinner facings and lower density honeycomb core for weight savings in light-duty areas.







### Gillfab™ 4405 A/B

Gillfab™ 4405 A/B and Gillfab™ 4405A (Ty 1) are specified to Airbus Industrie Technical Specification TL53/5000/79, Type 1/2. They are durable, indentation-resistant floor panels made with woven glass reinforced epoxy facings bonded to Nomex honeycomb core. Gillfab™ 4405B (Ty 2) is identical except a sheet of aluminum foil is bonded to the bottom facing. This panel is approved for use in the cabin areas (high traffic and under seat areas) of all A300 and A310 series aircraft.

Airbus is applying that same long-wear, weight-saving strategy to one of the newest aircraft in their fleet: the A380. Composites are a fundamental ingredient to the design of the massive Airbus A380. The A380 is the largest passenger airliner in the world and it can accommodate in excess of 500 passengers. Composites make up 25% of the airframe by weight.

### Gillfab™ 5509

The success of this aircraft's design hinges on weight reductions, and Gillfab™ 5509 is a cockpit floor panel that supports that goal. Ideally suited for emergency and main EE bays, Gillfab™ 5509 is a low-smoke aircraft sandwich panel with facings made from phenolic resin reinforced with cross-ply unidirectional carbon and Kevlar® honeycomb core. The facings include a thin fiberglass layer to protect against galvanic corrosion. It is lightweight and features good flame, smoke and toxicity properties. Many of the A380 sandwich structures use Gillcore HK honeycomb. Gillcore HK honeycomb incorporates Kevlar N636 paper in the honeycomb core and offers a 25% weight savings over Nomex honeycomb for high strength-to-weight and rigidity-to-weight ratios. It conforms to rigid smoke toxicity and flammability standards as well as high wet strength and corrosion resistance.





## We Ride This Tide Together



M.C. Gill Corporation has a broad line of high-performance, lightweight, OEM-qualified products to help our customers ride out the shifting economic tide. In 2009, we completed our expansion plans, adding essential new equipment at our headquarters and upgrades at our subsidiaries. We look forward to working with you to achieve your cost-reduction goals.

For a copy of our Airbus Qualified Products brochure or questions about specific products, please visit our website at [www.mcgillcorp.com](http://www.mcgillcorp.com) and contact the sales representative in your area.





# THE M.C. GILL GROUP OF COMPANIES



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Alcore does not sell sandwich  
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PAPER AND SHOULD BE RECYCLED



# THE FUNNY SIDE

# Trivia

## Boarding from what gate?

At the airport for a business trip, I settled down to wait for the boarding announcement at Gate 35. Then I heard the voice on the public address system saying, "We apologize for the inconvenience, but Delta Flight 570 will board from Gate 41."

So my family picked up our luggage and carried it over to Gate 41. Not ten minutes later, the public address voice told us that Flight 570 would, in fact, be boarding from Gate 35.

So, again, we gathered our carry-on luggage and returned to the original gate. Just as we were settling down, the public address voice spoke again: "Thank you for participating in Delta's physical fitness program."

## Catching the fish

Jim had an awful day fishing on the lake, sitting in the blazing sun all day without catching a single one. On his way home, he stopped at the supermarket and ordered four catfish. He told the fish salesman, "Pick four large ones out and throw them at me, will you?"

"Why do you want me to throw them at you?"

"Because I want to tell my wife that I caught them."

"Okay, but I suggest that you take the orange roughy."

"But why?"

"Because your wife came in earlier today and said that if you came by, I should tell you to take orange roughy. She prefers that for supper tonight."

**How many cells does the average person have in their body?** 3 trillion.

**What is the smallest country in the world?**

Vatican City, which is located inside Rome.

**What color dye comes from onions?** Yellow.

**What is the most player points in an NBA game?**

The most points scored by an individual in an NBA game is 100, by Wilt Chamberlain, when he played for the Philadelphia 76ers against the New York Knicks on March 2, 1962.

**In which mountains are the "Lost Dutchman Mine" said to be located?**

Superstition Mountains, in Arizona.

**Where is the driest place on Earth?**

A series of valleys near Ross Island in Antarctica where, for the past two million years at least, no rain has ever fallen.

*Source: "Reader's Digest Book of Facts"*

**How fast do raindrops fall?**

Not including wind-driven rain, raindrops fall between 7 and 18 miles per hour (3 and 8 meters per second) in still air. The range in speed depends on the size of the raindrop. Air friction breaks up raindrops when they exceed 18 miles per hour.

**Did you know?**

Most left-handers draw figures facing to the right.

There is a high tendency in twins for one to be left-handed.

Left-handers adjust more readily to seeing underwater.

Four of the five original designers of the Macintosh computer were left-handed.

One in four Apollo astronauts were left-handed.

